

A Response to “Does Natural Selection Exist?”: Creatures’ Adaptation Explained by the Design-based, Organism-driven Approach: Part 2

Randy J. Guliuzza, Institute for Creation Research, 1806 Royal Lane, Dallas, Texas 75229.

Abstract

This second installment is a continuation of my response to a recent critical paper (Jeanson 2013) on a series of *Acts & Facts* articles published by the Institute for Creation Research (ICR). The series contrasted a programmed design innate to organisms that enables them to fill environmental niches versus natural selection. For brevity, I refer to the critical paper as “the critique” and the *Acts & Facts* articles as the “series.” Part 2 corrects the critique’s inaccurate assertion that throughout the series I fail to address the “process use” of natural selection in rejecting it as simply a misleading mystical mental construct. I document why the critique should not claim with any certainty, from an array of other conflicting definitions, that “a process” underlies an accurate definition of natural selection. Four objective findings are noted as to why natural selection is not like a design process or other real processes, since within “the natural selection process,” several steps or elements are outside the realm of human detection or understanding, i.e., mystical. While the unambiguously identifiable elements claimed for natural selection, are all linked to an organism’s innate systems or their outcomes. Significantly, the key “selection step” (in the critique’s process definition of natural selection) cannot be observed in nature or attributed to mindless nature, but “selection” is only an imagined event in a selectionist’s mind—who then projects selective capacity onto nature. Scientific documentation is lacking to quantify an environmental “selection pressure,” or to identify corresponding selective elements legitimizing natural selection’s equivalence to the real “artificial” selection process by conscious human agency—even though these are basic essentials of naturalistic paradigms. Details of the inherent mysticism of selectionism are identified within the critique due to it embracing Darwin’s mystical twist of the word “selection” that distorts its normal usage or invalidly ascribes selective/volitional attributes to inanimate environments. The critique’s misleading usage of “selection” coupled with its untestable supposition that non-sentient environments can exercise agency are core tenets of selectionists, and generally fit with selectionism’s veneration of nature (principally through the reification or deification of natural selection). These problems with natural selection were addressed in the series’ eight major arguments which, this response shows, the critique only minimally engaged.

Keywords: design process, natural selection process, *vera causa*, agency, design analysis, adaptation, selectionism, mysticism, idolatry

Responses to Specific Points in the Critique

The critique’s criticisms may summarize the strongest arguments by either atheistic or theistic selectionists advocating for the reality of natural selection, and against the contention that natural selection is a misleading mystical mental construct (devised to bequeath credit to Nature and away from God for the outworking of an organism’s own innate capacities).

The primary goal of the critique is to answer the title question, “Does Natural Selection Exist?” with a resounding “yes.” This implied truism is after, as the critique claims, one sifts through all of the wrong definitions for the term then hits on this: “natural selection is a process.”

For the critique to be valid, i) its primary assertion that, “*As subsequent discussion will show, Guliuzza fails to address this process use of ‘natural selection’ when justifying his rejection of the term*” must itself be true, and crucially, ii) one must be certain that “a

process” is, in fact, the correct definition of natural selection. Yet, neither of these assertions is true.

The critique’s drawback is that it just did not engage the key arguments of ICR’s series to correct them.

ICR’s Eight Key Arguments are still Valid

The series had eight key arguments, yet only three were addressed, two lightly and one tangentially. These key arguments were repeated in nearly every article in the series and often included as section titles in bold print. In this response, they are summarized to a few sentences and supported with a single quotation. They show that natural selection as a purported “process” was repeatedly addressed.

The critique incorrectly asserts that the key arguments were “referring to the metaphysical use of ‘natural selection’” and summarily waved them off as not applicable to a “process” definition. Thus, the key arguments were only dismissed and not corrected.

Key arguments 3, 6, and 7 are answers to issues raised in the critique. Key argument 8 explains why several assertions in the critique are repackaged naturalistic thinking.

Key Argument 1

Organisms (individually and as populations) actively self-adjust via similar outworking of internal information-based designed processes found in adaptive man-made systems, enabling the organisms to solve environmental challenges and, thus, facilitating their ability to fill ever-changing niches.

Adaptive capacity is internal to organisms, meaning that so-called environmental selective forces are not a proximate cause producing phenotypes (and should not be given credit as such). Scenarios invoking “selective” environmental “agents” are obsolete, intrinsically mystical, explain nothing, and misidentify the proximate cause initiating adaptive processes.

ICR’s series stated, “The crucial question: is adaptive power external or internal?” “Does functional power reside internally or externally? That is the crucial question in explaining how rockets work or how organisms adapt to environmental conditions. Note that in all cases, function *results* from the operation of information-based systems. Intelligence is the source of that type of power” (Guliuzza 2011c, p. 12).

The challenge remains: Selectionists are asked to identify an environment-based system and then explain how it or some condition can be considered a proximate cause of an organism’s adaptation.

Key Argument 2

Words offered as the label of any process should accurately reflect, describe, or explain the events/steps in that process, however, the words “natural” and “selection” are so inaccurate they are deceptively misleading.

This is *not* referring to the invalid use of metaphors, it is referring to whether words chosen as titles of processes are accurate descriptors or process events. For example, consider how the word choices for “college application process,” “rubber vulcanization process,” “steel annealing process,” “digestive process,” and “sexual selection process” reflect how people apply for college, rubber is vulcanized, steel is annealed, how food is digested or mates are actually selected. In contrast, if natural selection is truly a process, the words “natural” and “selection” are invalid since these words fail as accurate descriptors of any process interactions between an organism and its environment. In fact, “selection” misleads thinking to embrace as genuine a selection event that emphatically does not happen in the process.

It is only the mind of a selectionist that imagines a selection event happening—not in a process.

This yet unanswered criticism was leveled shortly after publication of *Origin of Species* (1859). This mystical use of selection is so off target that when an analogy is made of it to real breeders who make real selections about survival by using real minds, that real process is labeled by selectionists as “*artificial* selection.” “Sexual selection” is also not encompassed in the critique’s description of the process of natural selection.

ICR’s articles stated, “Do the words ‘natural’ and ‘selection’ in any verifiable way accurately *describe* observable interactions between an organism and its environment? Have the words ‘natural’ and ‘selection’ been effectively employed to divert attention away from recognizing where the power for organisms to solve environmental problems really resides—i.e., strictly within well-designed innate capabilities of organisms?” (Guliuzza 2011a, p. 12).

The question remains: How do the words “natural” and “selection” as normally understood (i.e., excluding mystical twists) accurately describe any of the steps in the alleged process [(1) variation; (2) differential survival; (3) inheritance of traits from the survivors” (p. 286)] asserted to be natural selection?

The challenge remains: Will selectionists acknowledge that no real selection event takes place, and if so, why do they not incorporate a more accurate, non-misleading word to explain their observations?

The challenge remains: If selectionists admit that no real selection event takes place, why do they advocate for a “natural selection process” if the key step in the process is beyond the realm of human senses or any other detectable means?

Key Argument 3

If selection is a process, how does the outworking of the process actually differ from the routine outworking of systems-based capabilities inherent to organisms themselves? Why shouldn’t those systems simply be credited as the vera causa described in Part 1?

The critique claims that natural selection is a distinct process in its own right, but then adds that, “Clearly, ‘natural selection’ *also* refers to the operation of *several fundamental biological processes*: (1) variation; (2) differential survival; (3) inheritance of traits from the survivors. As subsequent discussion will show, Guliuzza fails to address this *process* use of ‘natural selection’ when justifying his rejection of the term” (p. 286).

The critique misses how ICR’s series (in the very first article) directly addressed this bait-and-switch deception of how one distinct process’s title, “natural selection,” is ascribed to “the operation of several fundamental biological processes”—all different processes which

reside within organisms. In regard to *vera causa*, this new "selection" process, in essence, is enabled to "steal" causality from the innate systems designed within an organism...and credit from its Designer.

ICR's articles stated, "The ill-defined nature of selection contributes to fundamental, yet profoundly unanswered, questions by serious researchers...If selection is a process, do the conditions specified for its occurrence actually *differ* from the unfolding of abilities inherent to *organisms themselves*?" (Guliuzza 2011a, p.12).

Obviously, ICR's series clearly addresses selection as a "process" and it actually challenges the critique's assertion that selection is a *unique process* by an important question the critique never answers: Why should these named "fundamental biological processes" innate to organisms be called by some other name like the "natural selection process?"

Since it is multiple levels of systems strictly within organisms which i) produce variations between traits, ii) entail developmental molecular processes to actually produce traits (like white rabbit fur which successfully camouflages the rabbit in white snow), iii) facilitate reproduction, and iv) enable inheritance of traits to offspring, design analysis shows that causal credit must reside solely with the organism. Recall that no single element in the system is privileged over another and cannot be ascribed causal credit—which covers mutational changes in genetic information just as Noble rightly points out, "paradigms for genetic causality in biological systems are seriously confused" (Noble 2008, p.3001). Design analysis highlights an inconsistency which the critique repeats.

The question remains: why shouldn't researchers just use design analysis to describe biological process functions underlying how organisms relate to their environment, thus highlighting how innate systems should be credited with causality?

The substance of Key Argument 3 relates to several important assertions in the critique which will be answered here before moving to Key Argument 4.

The critique's core claims are false: ICR repeatedly addressed natural selection as process

Since I was very aware of both my coworker's and one of his paper's reviewer's strong beliefs in natural selection as a process, the series essentially addressed all major arguments supporting the process definition of selection (natural selection as a "force" was also assessed). This emphasis is confirmed by the above quotations characterizing natural selection as a process. However, ICR's series made it clear that it was only out of the many conflicting definitions for selection that "process" was possibly the best.

How does the critique square its repetitive assertions that, "Again, Guliuzza fails to distinguish between process and metaphysics" (see pp.287, 288, 291) with a clear statement from the series like, "A 'process' may be the best description of selection" (Guliuzza 2011a).

Tellingly, the critique's *closing* analytical section addressed my recognition that "process" may best describe selection with its own question, "Has Guliuzza finally recognized the *process* definition of natural selection?"(p.291). Might not readers get a false impression that ICR's series had been omitting the process use of selection all along?

The truth is, the very *first* article in the series initiated the whole discussion of natural selection as a process as is shown by this early statement, "If selection is a process, do the conditions specified for its occurrence actually *differ* from the unfolding of abilities inherent to *organisms themselves*?" and culminating with, "A 'process' may be the best description of selection" (Guliuzza 2011a).

In fact, discussions of "process" in the series happen over 30 times scrutinizing selection as a process or contrasting selection to real processes (see table 1). The major assertion of the critique that, "Guliuzza never wrestles with the process definition of 'natural selection,'" and he lumps all definitions of "'natural selection' into one..." and, "Over and over, Guliuzza denounces and demonizes natural selection, all the while failing to address the process" is incorrect on the facts alone (see table 1).

The critique's validity is tied to establishing that ICR's series had expounded on only metaphysical uses of natural selection while neglecting to engage it as a process. This assertion is false.

Natural selection remains an ill-defined term

The critique did not respond to the series' analysis by a British expert on the history of natural selection, Michael Hodge, who concisely states the problem:

To understand the history of the term "natural selection" both before and after this moment in the *Origin*, we have, therefore, to look not for a sequence of explicit definitional equations but, rather, for the reasons why people, starting with Darwin himself, have felt themselves able to grasp and wield the concept adequately in the absence of consistent, authoritative definitional analysis of the term. (Hodge 1992, p.212)

The critique minimized this fundamental problem by simply claiming that natural selection is a "nuanced term" (p.286).

The critique's "definition" analogy defeats its own argument

Hodge makes clear the central point: that there is no authoritative consensus defining what natural

Table 1. ICR *Acts & Facts* series’ treatment of natural selection as “process.” ICR’s series addressed “process” usages by i) scrutinizing natural selection as a true “process,” ii) demonstrating how the so-called process of natural selection is misascribed causal (i.e., “selective”) credit for the anticipated results flowing from the real systems innate to organisms, or iii) contrasting the alleged process of natural selection to real design processes.

<p>Guliuzza, R. 2011b. Darwin’s sacred imposter: Recognizing missed warning signs. <i>Acts & Facts</i> 40, no. 5: 12–15</p>	<p>In a single paper, some sentences use natural selection as a cause and others as an effect. Some authorities say it is only a process.... If selection is a process, do the conditions specified for <i>its</i> occurrence actually <i>differ</i> from the unfolding of abilities inherent to <i>organisms themselves</i>?</p> <hr/> <p>he completely replaced centuries of certainty about divine design with the notion of a mindless, materialistic process—natural selection—that could accomplish the same result.</p> <hr/> <p>Naturalists, as noted above, know the immense hurdle they face in selling evolution: People “bridle at the thought that it’s all driven by a mindless” process.</p> <hr/> <p>he responded to those calls for him to justify use of the word “selection.” Darwin admitted, like all evolutionists will when challenged, that calling the process of how organisms fit environments “selection” was not true.</p> <hr/> <p>Isn’t it wise to show that that use of the word “selection” has never been justified, but is just the ruse to slip intelligence back into a design process after taking God out?</p> <hr/> <p>Indeed, a “process” may be the best description of selection.</p> <hr/> <p>Advocates of process always include three necessary conditions: 1) reproduction of traits, 2) which differ in ability to solve environmental problems, 3) and which are heritable.</p> <hr/> <p>This explains how the process of organisms programmed to fit environments and fill them is the outworking of an intelligent plan, and not the product of an imaginary environment-based selector that “just happens.”</p>
<p>Guliuzza, R. 2011b. Darwin’s sacred imposter: How natural selection is given credit for design in nature. <i>Acts & Facts</i> 40, no. 7: 12–15.</p>	<p>the main engine of evolutionary change was natural selection. Sure, some details of these processes are unsettled,...</p> <hr/> <p>a certain critical muscle-renovating process called “Ecospheric Renovation” can act on anyone...</p> <hr/> <p>Readers are told that this process will work... just a clever label placed on innate metabolic processes already taking place...</p> <hr/> <p>simply taking credit for my own processes. Like “natural selection,” the words “Ecospheric” and “Renovation” effectively divert attention away...</p> <hr/> <p>If modern descriptions of “selection” are of a process, a study of prerequisites from either evolutionist or creationist advocates <i>unfailingly</i> includes three organism-centered conditions...</p> <hr/> <p>Four recent and emphatic claims are that natural selection is “just a principle,” “a real process,” “only a figure of speech,” or “survival of the fittest.” These clashing assertions typify...</p>
<p>Guliuzza, R. 2011c. Darwin’s sacred imposter: The illusion that natural selection operates on organisms. <i>Acts & Facts</i> 40, no. 9: 12–15.</p>	<p>but you see the practical result of the process [struggle for existence] is the same as if some person had nurtured the one and destroyed the other seeds.... That is what is meant by NATURAL SELECTION;....</p> <hr/> <p>The disconnect that is almost universally missed is this extraordinarily clever ploy: Use “selection” as an <i>external</i> “pressure,” but define it as a “process” whose interrelated elements are, strangely, the actual outworking of the organism’s own <i>innate</i> capacities...</p> <hr/> <p>while organisms with traits still fitting A stayed put, and it is yet uncertain why some died—a fact-restricted explanation. Information-based systems internal to organisms drive the process.</p> <hr/> <p>In design processes, an engineer’s power flows from his knowledge...</p> <hr/> <p>to see and select specific materials and processes that build a plan suitable to solve a problem...</p> <hr/> <p>it is a misrepresentation to view the process from the perspective of the problem and claim that the “problem selected” the best plan.</p> <hr/> <p>No one does this for a human design process. Yet, this is precisely what evolutionists do with natural selection.</p> <hr/> <p>Natural selection as a design process is only an illusion—meaning it cannot explain nature’s design.</p> <hr/> <p>Some creationists regularly say that organisms “undergo the process of natural selection.”</p> <hr/> <p>Really? Engineers routinely measure external forces in real processes as they exert their influence.</p> <hr/> <p>If there was a “selection detection” meter in existence and it was placed on any organism “undergoing the process” to actually sense the “molding force” “operating” on it, what would it register?</p>
<p>Guliuzza, R. 2011d. Darwin’s sacred imposter: Natural selection’s idolatrous trap. <i>Acts & Facts</i> 40, no. 11: 12–15.</p>	<p>driven by random mutation and selection, but at certain pivotal junctures in evolutionary history, such random processes can create structures...</p> <hr/> <p>Since selection is not <i>really</i> an agent or force, it has always been mysteriously defined. Supporters continue to sharply debate whether it is a process, concept, principle, cause, effect, or something else.</p> <hr/> <p>advocates’ use of selection as, say, an external “pressure,” but then defining it as a “process”...</p> <hr/> <p>Artificial selection constitutes a true experimental—as opposed to observational—test of the hypothesis that selection causes evolutionary change.” That’s because both processes inexorably result...</p> <hr/> <p>Natural selection is simply a covering term or place-holder for describing the various processes involved in...</p> <hr/> <p>that selection was always used as “an impersonal process that is continually given personal qualities.”</p>
<p>Guliuzza, R. 2012a. Darwin’s sacred imposter: Answering questions about the fallacy of natural selection. <i>Acts & Facts</i> 41, no. 2: 12–15.</p>	<p>When creationists show that there is no real <i>exogenous</i> selector (or process) that “is a powerful molding force” operating on organisms for evolution, then...</p> <hr/> <p>They always use selection as an <i>external</i> “force” that works on an organism from the outside, but must define selection as a “process”...</p>

selection is. Paradoxically, the critique's principle rebuttal to this quandary is to compare natural selection to Christianity which unequivocally does have an authority—the Bible. The rebuttal says:

Are multiple definitions of a term a good warning sign that the core concept is flawed? Apply Guliuzza's standard to Christianity. If a curious unbeliever were to ask multiple self-professed evangelicals what Christianity is and what it looks like in practice, he might get multiple answers...the unbeliever would end up very confused and may reject Christianity by Guliuzza's standard. This rejection would be clearly misguided. (p.286)

Agreed. The rejection of Christianity would be misguided. But fortunately *not* for the reason the critique offers, "Because multiple definitions do not necessarily reveal an underlying error; they may simply reveal that diverse people co-opt a term ("Christianity" or "natural selection") for their own purposes" (p.286).

But because Christianity has exactly what natural selection is lacking: an authority to define precisely what Christianity is *despite* conflicting human definitions. However, take the Bible away, and Christianity is in the same position as natural selection; with a lot of "very confused" observers. And "rejection" of "Christianity" actually becomes irrelevant because there is no real "Christianity" to reject—just a bunch of conflicting opinions which one would be justified, not misguided, in rejecting. The critique's eloquent example trying to refute ICR's contention that natural selection is mystical because it is ill defined, actually becomes an excellent illustration confirming ICR's point.

With the minimization that natural selection is merely, "a nuanced term," the critique dodged this and other documentation that the weakness with selection is *multiple conflicting definitions*—not simply nuances. This fact is a clue that "selection," as used in scientific literature, was a mysterious concept too slippery to define. James Shapiro, a principal researcher in genetics at the University of Chicago does not see natural selection as a "process" but rather Natural Selection is a descriptive phrase which is used by selectionists to cover gaps in their accounts of adaptive novelties (Shapiro 2013). In fact, one of the critique's anonymous reviewers contends that natural selection is a "concept" (Lisle 2010, pp.17, 122) which is a very different thing than a "process."

These clashing assertions typify why scientific literature is awash in ecological, figurative, and rhetorical uses. Hodge distills the problem:

A quite general issue has still received no canonical treatment: what kind of a thing is natural selection, anyway? A law, a principle, a force, a cause, an agent,

or all or some of these things? The view that natural selection is a law has been countered with the view that it is a principle, while that conclusion has been countered in turn by an insistence that it is neither. (Hodge 1992, p.218)

The critique's assertion that natural selection is a "process" is arbitrary

How does the critique *know* that natural selection is truly a process and not just a mystical mental construct, given that, unlike Christianity, natural selection does not have an authoritative definition?

The critique's proclamation that, "natural selection is a process" is arbitrary. If one searches its entirety for definitive objective support, its belief stands solely on this appeal to authority, "*As evolutionists know...*" and nothing more. Which evolutionists...and what makes their assertions more definitive than Hodge's analysis or Lisle's claims? The literature does *not* support the critique's contention, "as evolutionists know" natural selection is a process, in fact, it aligns with Hodge's analysis that they actually do not know what comprises the process.

If natural selection is a real process, why can't researchers determine what it works on?

Real processes consist of real events. If natural selection is a well-defined process, then *what* the process works on should be unmistakable. However, in scientific literature the "unit of selection" has proven to be very elusive, which is suggestive of a mystical selection event.

Richard Dawkins claims that, "A gene is defined as any portion of chromosomal material that potentially lasts for enough generations to serve as a unit of natural selection" (Dawkins 1976, p.28). In contrast, fellow Oxford Professor, Denis Noble insists, "We must shift our focus away from the gene as the unit of selection to that of the whole organism (Tautz 1992)" (Noble 2008, p.3012). Developmental biologist, Gilbert and Epel believe in the process and recently asserted, "This may allow natural selection to favor 'teams' rather than particular individuals and may also privilege 'relationships' as a unit of selection" (Gilbert and Epel 2009, p.370). Evolutionary biologists, Gardner and Grafen also hold that natural selection acts on population groups (i.e. the gene pool) he dubs the "superorganism" (Gardner and Grafen 2009, p.660). But Coyne, another process advocate, argued in the same year, "And adaptations always increase the fitness of the *individual*, not necessarily of the group or the species. The idea that natural selection acts 'for the good of the species,' though common, is misguided" (Coyne 2009, p.121).

So, one of the fathers of the *process* view of selection, Harvard's Ernst Mayr, must be very misguided when

he wrote, “However, in addition to the individual, a group can also be the target of selection if it is a social group and cooperation within this group enhances its survival. Finally, gametes are also directly exposed to selection and different gametes produced by the same individual may differ in their ability to achieve fertilization” (Mayr 2001, p.280). Does the process work exclusively on individuals, or is it teams, groups, gametes, and genes? Can any selectionist say for certain? Is the “selection” event only happening in their minds and is not a tangible reality? The distinction between these very different things is important. In contrast to real engineering processes which clearly specify what they work on, the action of the “natural selection process” is ill-defined and calls into question this definition. Even if selectionists could produce a scientific paper that identified a real “selection event,” which they cannot, given the hundreds of potential traits, *what* was truly “selected” would still remain without certainty.

If natural selection is a real process, why is its outcome ambiguous?

Engineers design real processes with real outcomes. If natural selection is a real process, then there should be an unambiguous outcome at the end of the process. Evolutionary biologist, Jerry Coyne, firmly holds to natural selection as a process. He argues that the outcome is, as expected, adaptation, “The theory of natural selection has a big job—the biggest in biology. Its task is to explain how *every* adaptation evolved, step by step, from traits that preceded it. This includes not just body form and color, but the molecular features that underlie everything” (Coyne 2009, p.119). Another process adherent, evolutionist Richard Dawkins concurs, “The theory of natural selection provides a mechanistic, causal account of how living things came to look as if they had been designed for a purpose” (Dawkins 1982, p.45). Also arguing that adaptation is the outcome of the process, Francisco Ayala, another process proponent said, “In different localities or in different circumstances, natural selection favors different traits, precisely those that make the organism well adapted to their particular circumstances and way of life” (Ayala 2007, p.56).

But another devotee to natural selection as process, Mayr, acknowledges some ambiguity, “There must be literally hundreds of definitions of adaptation in the literature...The legitimate use of the term adaptation is for a property of an organism, whether a structure, a physiological trait, a behavior, or anything else that the organism possesses, that is favored by selection over alternate traits” (Mayr 2001, pp.149, 150). But evolutionary geneticist and supporter of natural selection as a process, John

Endler, recognized that defining adaptive traits as “favored by selection” and the reason why they were “favored” is because the traits were adaptive actually explains nothing. In what is now considered a seminal treatise, Endler painstakingly reformulated the process of natural selection in 1986 to show that, “it is neither a tautology nor a metaphysical exercise” and the process causes, “only [gene] frequency changes in populations” “addresses the problem of the *spread* of new variants or new adaptations, not their *origin*” and “is not an explanation for adaptation...” (Endler 1986, pp.3, 46, 248). Whether or not a process has a definitive outcome (adaptation) is not trivial as it calls into question the legitimacy of the so-called process itself...and this is far more than a nuanced disagreement.

Harvard’s renowned evolutionary geneticist, and backer of natural selection as process, Richard Lewontin, also argues that the basic steps in the natural selection process do *not* account for adaptation. He delineates why consensus is lacking on whether “adaptation” is the outcome of the process. Why? Because process advocates are not including all of the same steps in their individual ideas of process. Lewontin’s insightful observation concerns whether *death* is a necessary step in the process. He says, “The mechanism by which organisms are said to adapt to the environment is that of natural selection. The theory of evolution by natural selection rests on three necessary principles [variation, heredity, natural selection]...The three principles say nothing, however, about adaptation. In themselves they simply predict change caused by differential reproduction success without making any prediction about the fit of organisms to an ecological niche or the solution of ecological problems. Adaptation was introduced by Darwin into evolutionary theory by a fourth principle: Variations that favor an individual’s survival in competition with other organisms...tend to be preserved (the principle of the struggle for existence). Darwin made it clear that the struggle for existence [is the vital “pressure”], which he derived from Thomas Malthus’ *An Essay on the Principle of Population*,...” (Lewontin 1978, p.220). Mayr fully backs this assessment up within his chapter on natural selection in subsections, *Natural selection is really a process of elimination* and *Struggle for existence* (Mayr 2001, pp.117–126).

So the steps which Coyne (2009, pp.111–122) and Endler (1986, p.4) enumerate as the process of natural selection are *not* adequate to explain adaptation—only a spread of variations fitting a normal bell-shaped curve. Death resulting from competitive struggle is the key to skewing the curve. The critique’s appeal to Darwin’s definition (p.286) completely misses Darwin’s point. Darwin was not

trying to enumerate a process, per se, but underscore the fundamental importance of the ratcheting power toward adaptation of eliminating non-useful traits and preserving useful ones via death versus survival in individuals, "being preserved in the struggle for life... This *principle of preservation*, I have called, for the sake of brevity, Natural Selection" (Darwin 1859, p. 127, emphasis mine).

That is why Darwin always couched natural selection as the struggle for survival; again he said "On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favourable variations and the rejection of injurious variations, I call Natural Selection" (Darwin 1859, p. 81). On p. 61 he again identified the principle of preservation following struggle and survival as natural selection. He later fully adopted Herbert Spencer's summation of, "survival of the fittest" (Mayr 2001, p. 118). Not surprisingly, even theistic selectionists will appeal to death as useful for selection and ascribe it to God as seen in the exhibit on "Natural Selection" in the world's largest Creation Museum which says, "Although natural selection results in the death of some organisms, it exhibits the care of God for His creation..." (Creation Museum 2014).

If natural selection is a real process, why is there no agreement on Darwin's crucial step?

The position of Darwin, Mayr, and Lewontin is that the death of organisms with injurious or non-useful variants (in order to eliminate their genetic material from the population) is essential for evolution. Gilbert and Epel enumerate five process steps for natural selection with steps two and three incorporating death; step three specifically saying, "Death is selective" (Gilbert and Epel 2009, p. 292) (which, from a design perspective, is a mystical assertion since death is just death and cannot "select" anything).

However, Endler argues just the opposite. He emphatically asserts that death is not essential saying, "Consider an expanding population consisting of two genotypes, one of which is increasing faster than the other. Some researchers (e.g., Darlington, 1983) do not consider this a case of natural selection, because there is no differential mortality. This peculiar restriction to mortality selection is probably a historical artifact of the seductive attractiveness of Spencer's 'survival of the fittest.' Mortality... is a rather incomplete if not misleading definition" (Endler 1992, p. 221). Endler's assessment agrees with the chief architect of the selection-based neo-Darwinian synthesis, Ronald A. Fisher who emphasized that superfecundity, with its corollary of great mortality, was not necessary for nonrandom differential reproduction, and so should

not be thought intrinsic to natural selection (Fisher 1958, p. 47). Again, this non-trivial disagreement over a key process step raises questions about the validity of defining natural selection as a process.

Though the critique alleges that "differential survival" is a "process" (p. 286), it is likely an effect, not a process. The reason why it is an effect is because it results from the always unmentioned, but essential, process step of selectionist theory—the mystical "selection step" or the event in which the environment mystically selects organisms with useful traits (in contrast, design theory would see differential survival resulting from the successful solutions to environmental problems by specific organismal traits which can be traced to specific genetic/epigenetic information in the organisms).

The current state of the "process" definition of natural selection is that it is a process with no consensus on what the process works on, the key step(s), or its final outcome—this is not a reassuring process. Recall that scientific explanations of causality should be lucid and free of ambiguity or indistinctiveness. Clarity is not a characteristic of the scientific use of the term "natural selection."

Accordingly, the critique stands with nothing more than a bald assertion that it has the correct definition. The contention that "as evolutionists know" is not only arbitrary without any evidential or authoritative support, but it is now evident that evolutionists don't know. Certainly, someone can call (even vehemently insist) natural selection anything since the words are not tied to anything real.

Thus, since natural selection in-and-of-itself cannot be defined (and there is no authority to define it), there is no basis for assertions that any article *must* consider "natural selection" as a cause of adaptation. The critique presents no sound reason why natural selection, depending on context, cannot be dismissed as a meaningless term or a mystical mental construct, or a credit-stealing phrase applied to the outworking on an organism's own capacities.

Correcting an important misrepresentation in the critique on this point: ICR's series never claimed that there were no field studies regarding natural selection

An extensive criticism is the contention in the critique that ICR's articles made a silly claim that there are *no field studies* regarding natural selection. The critique concluded: "To claim that no field studies exist would be a leap over logic and data. Guliuzza does the latter" (p. 288). ICR's series' actual criticism of selection was that *the "relevance" of selection seen in actual field studies is trivial* (Guliuzza 2011d, p. 14). Sadly, the critique's total miss of the genuine

topic only leaves the impression that ICR's author and reviewers were foolish. Since ICR's series, in fact, claim to cite actual field studies, the critique's statement, "To claim that no field studies exist..." is so far afield that it is remarkable how this criticism passed any review.

A reviewer needed to look no further than the topic in the original article which is entitled: *Irrelevant: Meager measurements of selection suggest it's not real* (Guliuzza 2011d, p. 13).

The analysis about selection being so irrelevant that it may not be real began as follows:

It is true that some genuinely real things may be functionally irrelevant, but non-real things are always irrelevant. Relevance is one objective indicator of reality, which explains why evolution itself must be promoted by its purveyors as the unifying fact of biology and, therefore, vital to the economic status of future generations. (ibid, p. 13)

The article cited three top leaders in their fields, an authority on fitness and natural selection Joel Kingsolver, geneticist Eugene Koonin, and creationist paleontologist Kurt Wise—all of whom had completed extensive reviews of field studies on selection. Of Kingsolver et al.'s (2001) study the article stated,

The American Naturalist published in 2001 the largest analysis of the degree to which selection of changes of specific physical traits in an animal group affects their fitness—as measured by survival, mating success, and offspring. It tabulated 63 prior field studies covering 62 species and over 2,500 estimates of selection. Significance was obtained using statistical analysis and not opinions. The highest median correlation of trait selection to fitness was a low 16 percent. This means 84 percent of changes were not explained by selection. So-called directional and stabilizing selection were no more likely to happen than non-directional and disruptive selection. In studies with species sample sizes greater than 1,000, the correlation of selection to survival was essentially negligible. (Guliuzza 2011d, p. 14)

The other researchers had similar conclusions. Therefore, the entire quote of article's conclusion was, "The relevance of selection is not in actual field studies. So where do researchers find selection relevant? In laboratory studies where intelligent humans with a real volition actually *make choices*" (Guliuzza 2011d, p. 14). The critique's assertion, "To claim that no field studies exist..." (p. 288) is so far off target that it is apt to be misleading.

The critique also asserts that either Kingsolver et al. or I were somewhat duplicitous in "selectively" citing the literature; specifically, that Peter and Rosemary Grant's field studies before, during, and after Kingsolver et al.'s study period were neglected

by both. That's a grave sounding charge, but it is readily shown to be without merit. Kingsolver et al. needed a start/end period for their study. During that 14-year period they had already, "tabulated 63 prior field studies covering 62 species and over 2,500 estimates of selection" (Kingsolver et al. 2001, p. 245) which generated an extremely large sample size underlying their statistical analysis (and remains the largest review to date). Biostatisticians know that a large enough sample size and proper analysis techniques can yield results accurately reflecting those from all of the studies. The critique did not show how this analysis was crippled in any way. If it had included some biostatistical analysis of its own demonstrating how inclusions of the "key papers on Darwin's finches" (p. 288) to Kingsolver et al.'s review significantly alter his results, then that would add constructive weight to the criticism. It did not. The critique's claim only has its effect in the insinuation that underhanded scientific trickeries have occurred and not in any merit that Kingsolver et al.'s conclusions are invalid.

For the sake of completeness though, one might ask, what do the Grants' studies reveal? ICR's series fully recognized that researchers like the Grants and evolutionists like Jerry Coyne claim that they see examples of natural selection. That is a given. However, ICR's articles' argument has always been that what is observed is misleadingly labeled by them as "natural selection" since causality is actually outworking of an organism's innate processes—which can be confirmed by reading the Gibbs and Grant (1987) and Grant and Grant (2002) papers cited in the critique. Just as important, the Grants' own studies tend to confirm ICR's series argument that selection is not relevant in any evolutionary sense since the sizes of finch beaks over time tend to oscillate around an average size. That is why their concluding papers are titled, *Oscillating selection on Darwin's finches*, (Gibbs and Grant 1987) and *Unpredictable evolution in a 30-year study of Darwin's finches* (Grant and Grant 2002). Could a better explanation of the oscillation around an average in the beak sizes be the manifestation of resilient innate systems demonstrating the design properties of plasticity balanced with robustness?

Correcting another misrepresentation in the critique on this point: ICR's series never claimed that selectionists did not use the metrics of fertility, gene frequencies, or death rates

An argument in ICR's series was harshly condemned in the critique which said, "Guliuzza extends this error by claiming that programmed filling is measurable while natural selection is not: "... 'Fertility,' 'gene frequencies,' 'death rates'—this

is what scientists measure when studying the process of natural selection. Yet Guliuzza claims these metrics as his own and accuses natural selection of being unscientific and unquantifiable” (p.291).

The context in the series was showing how environmental “selection” is an “imposter” and falsely given causal credit for an organism’s capabilities (Guliuzza 2011b, p.15). The argument was based on this if-then postulate: if the environment was an active agent associated with adaptation, then the metrics measuring its success should be environment-based, but if the organism was active, then metrics would likely be organism-based. If selection was an “imposter” it would misleadingly employ organism-based metrics. Thus ICR’s article said, “Organism-based metrics such as fertility, gene frequencies, or death rates can be quantified as populations generate traits suitable to fill changing environments. What has not been quantified is any “selecting” force or intelligence. Nobody has ever seen a “selection” happen. The words “natural” and “selection” in no verifiable way accurately describe *observable* interactions between an organism and its environment” (Guliuzza 2011b, p.15).

It was already a given that advocates of environmental selection employ the metrics of fertility, gene frequencies, or death rates. But the point was that this practice by selectionists was not justified since these were “organism-based metrics.” The critique criticized what was already a given, but did not address the main issues of ICR’s article.

A pushback from the critique would have brought some helpful insights if it could: 1) answer why organism-based metrics should be used to justify environmental selection, 2) show why they are not positive evidence that organism’s innate capacities as active to solve environmental challenges, 3) identify some environment-based metrics used to measure outcomes based on “selection,” or document that natural selection is scientific and quantifiable by 4) identifying where someone has, in fact, seen environmental selection happen, and 5) justifying how the words “natural” and “selection” accurately describe *observable* interactions between an organism and its environment.

The series also advanced three other key arguments supporting the inherent mystical nature of natural selection. Selectionism’s mysticism was contrasted to what truly happens in engineered adaptability.

Key Argument 4

Natural selection fails as Nature’s (or any type of) design process since it erroneously ascribes “selective” capabilities to problems to select their solutions—an illusion the exact opposite of the design process executed by real engineers.

Evolutionists claim that the design in living things is explained by natural selection. One article in ICR’s series countered this assertion by showing how the process of natural selection failed as a process to explain the design in living things—a failure which is clearly accentuated when it is compared to a real engineering design process. By proposing that selectionists compare the alleged process of natural selection to a real design process, the series recommended an objective criterion, design-analysis, which would identify where adaptive causality resides.

ICR proposed that environmental conditions were only non-operative exposures to organisms which were usually challenges that organisms must overcome. Some evolutionists see the organism-environment interface in the same manner, “Evolution is often thought to be about finding optimal solutions to the problems that life throws up” (Gee, Howlett, and Campbell 2009, p.12). For them, the mystical problem solver is “evolution” while ICR asserted that there was no mystery, the problem-solving capacity resides in information-based systems within living things. Geneticist, Richard Lewontin, also advocated that an “engineering analysis” was the only objective standard to try to determine the adaptive usefulness of any trait (Lewontin 1978, p.221). ICR argued that problem-solving activity always resides in the *information-based* side of the solution-problem interface. In living things, the traits they express are potential solutions which either succeed or fail to solve environmental problems. Also, unlike the mystical “selection” event happening within the mind of selectionists, biological researchers could often see when a trait successfully fits a challenge just like engineers could often see when a design feature was suitable to a problem.

The series stated, “However, apply a reality check to their criteria—especially contrasting design mechanisms of a real designer versus natural selection—and the illusion of selection is clear... Natural selection as a design process is only an illusion—meaning it cannot explain nature’s design. It wrongly views problem solving from the perspective of passive environmental factors that are falsely empowered to ‘select’ the best traits” (Guliuzza 2011c, pp. 14–15).

The question remains: Can selectionists demonstrate why the notion that unconscious environmental challenges “select for” their solutions isn’t just a wholesale mystical mental construct which deflects credit away from an organism’s innate information-based systems which produce the solutions?

Correcting another misrepresentation in the critique on this point: ICR's series never claimed that DNA could "think" and "select"

The engineer-problem and organism-problem interfaces were compared to each other and showed how problem solving activity always resides in the *information-based* side of the interface which specifies materials and processes suitable to solve a problem... and not with the problem. The critique sarcastically attacked this analogy and said, "The problem with this analogy? At best, it is simply a metaphor. At worst, it deifies DNA. Does Guliuzza really think that DNA 'thinks' and 'selects'?" (p.290).

However, ICR's reviewers and I would not have allowed the foolish statement that DNA has the ability to think and select. The *full* quote from ICR's article said, "DNA's *information* corresponds to a real engineer's thinking and selecting" (Guliuzza 2011c, p.15). DNA's information which originated in God's mind does specify materials and processes suitable to solve problems just like the information flowing from an engineer's mind. This unfortunate caricature slipped through the critique's review process.

Key Argument 5

The use of natural selection by both atheistic and theistic selectionists is senseless since it is used as a mystical external force operating on organisms from the outside, but, incongruently, is always defined in terms of an organism's innate capacities.

The series stated, "The disconnect missed by believers in environmental selection and the real ways that organisms adapt is this: They always use selection as an *external* 'force' that works on an organism from the outside, but must define selection as a 'process' whose interrelated elements are, strangely, the actual outworking of the organism's own *internal* capacities to reproduce variable heritable traits" (Guliuzza 2012a, p.15).

The challenge remains: Identify a definition or usage of natural selection by any leading selectionist that does not *define* each step of the process in terms of the outworking of an organism's own innate capabilities.

Key Argument 6

The proper identification of vera causa (true proximate cause) of an organism's adaptation is not simply a matter of semantics.

The series claimed that, "Accurately distinguishing the power controlling actions is very different from quibbling over how to describe an action... But accurately identifying the power behind the action is important... In the realm of mainstream science, supporters of 'natural selection' routinely confuse

these differences. They assert that it is just two sides of the same coin to say either an environment 'selected for' a creature or a creature 'moved into' an environment. But if two opposite sources of power are in view—external versus internal—then correctly distinguishing them is very important" (Guliuzza 2011c, p.12).

The critique challenged the validity of the illustrations in ICR's series of how organisms express innate capabilities to solve environmental challenges. The series cited papers which demonstrated the outworking of very elaborate internal processes. The critique did not demonstrate how the cited results were not due to innate mechanisms. Additionally did the papers even suggest in any way that origin of the "relevant allele" was due to mechanisms outside of the organisms? No.

While ICR was showing internal processes, the critique substitutes actual evidence demonstrating external causations with a rhetorical device about how the cited research "did not rule out all actions of the environment" (p.290). The research did not specifically mention "ruling out" causes by aliens either, but the "not ruled out" maneuver is neither an argument against innate processes, nor that their data support how external causations should be "ruled in." Selectionists should identify environment-based systems as primary causes of an organism's adaptation.

In addition, the critique did not address powerful evidence about the cause of salmon self-adjustment to different environmental conditions in Gaskill and Thomas' paper supporting ICR's series (Gaskill and Thomas 2012).

Also note, that the series never insisted that causality must be either in the organism or in the environment. The possibility exists that causality of adaptation could be in both—or some other yet unknown process. In this regard, the series affirmed two things: 1) that at this time the scientific evidence indicates causality due to internal processes of organisms, and 2) that from a design analysis standpoint, environmental *vera causa* cannot be established by saying something like, "organisms may be *shaped* by their environment" because that statement still confirms a 100% original design-based *vera causa* since it is innate capacity that actually enables organisms to be changeable and defines which, if any, environmental condition as a so-called "shaper."

The challenge remains: Selectionists cannot expect accurate explanations of adaptation if they do not accurately identify the necessary cause of an organism's ability to adapt.

The question remains: Why are selectionists opposed to utilizing design-based analysis and

terminology for executing the fundamental purpose of science which is to identify true causality and also expose any magical thinking by people attributing powers to nature that they have never observed it manifesting?

Key Argument 7

Environmental exposures are not "agents" exercising "favor" on organisms, but it is the organism's traits which determine its ecological niches and determine if exposures are useful to it or not. It is the organism's traits which determine "differential survival" when exposed to different conditions.

The series stated, "Environmental stresses are nothing more than conditions to which organisms are exposed—and in and of themselves are neither 'favorable' nor 'unfavorable'... Whether one ecology is favorable for some organisms and not others has everything to do with the traits produced by organisms and nothing to do with any so-called selective power of nature" (Guliuzza 2012a, pp. 13–14).

Design analysis makes plain that environments do not "favor" or "punish" organisms. Rather, "favorability" in any certain environment is actually determined by the features of an organism's designed traits to either succeed or fail to solve environmental challenges—identical to environmental interactions with man-made things. The series explained,

It's easy to think that environments are active in doing things—often bad—to organisms since we can see organisms die "at the hands" of environmental influences. Thus, it's recognizably hard to see things differently from our long-term conditioning. Humans drown when held under water, are totally disrupted on impact after falling off a cliff, die if kept naked in sub-freezing weather, and are poisoned after eating certain plants. But fish live while held under water, eagles fly off cliffs, and many animals flourish in sub-freezing weather or thrive on plants toxic to humans. It should be immediately clear that environmental stresses are nothing more than conditions to which organisms are exposed—and in and of themselves are neither "favorable" nor "unfavorable". (Guliuzza 2012a, p. 13)

The series had summarized environmentalism for the reader as, "Or as eminent evolutionist Leigh Van Valen put it, 'Evolution is the control of development by ecology.' (Van Valen 1989) Belief that environments are the operative power playing a paramount role in adaptation is also called 'environmentalism'" (Guliuzza 2012a, p. 13). And, "Environmentalism frames the inanimate environment as an *external* 'selecting' agent that 'selects for or against,' 'pressures,' or 'favors.' The existence of an organism's traits is *owing to* or *due to* external environmental stresses" (Guliuzza 2012a, p. 14).

In design analysis, environmental factors are just collections of conditions to which organisms are exposed. Credit or blame resides with the designer of any trait's attributes for it to either succeed or fail in overcoming environmental challenges.

This type of analysis could seem foreign to selection-based environmentalists, but is not exclusive to design-based creationists. Harvard geneticist, Richard Lewontin converged on this identical point when he argued against selection-based adaptationist explanations in his classic paper, *Adaptation* (Lewontin 1978). He pointed out how the environment can conceivably be divided up into an infinite number of potential ecological niches consisting of any combination of conditions, however, almost all would be void of creatures. Thus, what specifies an actual niche *is the traits of the organism(s)* that actually occupy it. He said,

Finally, organisms themselves determine which external factors will be part of their niche by their own activities... If ecological niches can be specified only by the organisms that occupy them, evolution cannot be described as a process of adaptation because all organisms are already adapted. Then what is happening in evolution? One solution to this paradox... (Lewontin 1978, p. 215)

The proposed solution was Van Valen's Red Queen hypothesis in which organisms must have enough innate potential genetic variation just to keep up with changing environments.

The critique's argument consists only of incredulity

The critique dedicated a large section attacking ICR's argument that design analysis exposes the failings of evolutionary environmentalism by offering a classic defense of environmentalism. A good evolutionary explanation of the principles of environmentalism including the relationship of species, the environment, and ecological niches is detailed by Ernst Mayr (1963).

Unfortunately, if one searches the entire critique for a direct clash against this important point they will see only reaffirmations of the evolutionary position—where emphatic emphasis substitutes for analysis. ICR's point was simply brushed off with the single question, "Organismal survival has *nothing whatsoever* to do with the environment?" (pp. 288). Then an argument of emphatic incredulity is presented. Several examples were given to justify the incredulity.

This specific criticism's only strength is rooted in the author's and reviewer's inability to see design analysis applied to its examples as, "difficult to imagine" and "straining credulity" (p. 289). That is the problem with credulity arguments; incredulity is not evidence. What

is incredulous to one person may not be so to another. So arguments from incredulity should be rigorously tested in review before accepting them.

In this case, by extracting the critique's examples from the pervasive mysticism of selectionism, and going back to the basics of design principles, they actually affirm the argument in ICR's series. The critique said,

It is difficult to imagine that environmental stresses are not "favorable" in any sense of the word. Certain soils are clearly "favorable" to the development of certain plants and crops. The sudden extinction of a plant food source for a finch represents an "unfavorable" condition for the finch's existence. The environment (for example, ultraviolet light, carcinogenic chemicals, etc.) *causes* mutations. The sudden death of organisms in the area around Mount St. Helens in May of 1980 cannot be divorced from the environmental catastrophe (the volcanic eruption) that transpired. Guliuzza cannot exclude a role for the environment without straining credulity. (p.289)

Contrast plants to soils. Plants have an identifiable source of coded information and the soil does not. Given that thousands of different soil types simply exist, as Lewontin notes, it's the information side—the physiologic traits—of "*certain* plants" which specify the "*certain* soils" they'll grow in—not vice-versa. The finch's physiology and morphology specifies its own diet (Abbott, Abbott, and Grant 1977, p.153) which specifies whether any environment is an actual niche, i.e., "favorable" or not. Ultraviolet light and chemicals *may* be mutagenic to DNA, but only as determined by an entity's traits. UV light is successfully blocked by expressed traits of some living things, while some organisms/plants thrive in chemical exposures which are mutagenic to others not expressing necessary traits. While other organisms have systems which up-regulate DNA repair in the face of increased mutation. And again, it's the traits of organisms which determine whether the exposures of the Mount St. Helen's eruption are "unfavorable." Some animals and plants had traits enabling them to successfully fly away, run away, burrow into the ground, just withstand intense conditions, or even exploit the conditions for propagation purposes, while the design parameters of many other entities' traits were woefully exceeded (the design was likely never *intended* to endure those exposures). It doesn't strain credulity any more than recognizing that one submarine is designed to descend to the ocean floor, while another would be crushed by the pressure—design analysis shows that traits determine exposure "favorability" and brings a lot of clarity to explaining an organism's self-adjustment.

Recall the main question in ICR's series, "...is adaptive power external or internal?" (Guliuzza

2011c, p. 12). In contrast to the selectionists, the series contends that this power is internal to entities, while all selectionists must appeal to external factors as at least partial causations. If one searches the entire critique for documented experimental evidence of external mechanisms as *vera causa* for adaptation in organisms, none are found. Instead of detailing a literature-supported mechanism, a random, information-destroying exposure (chemicals or UV light) to produce evolutionism's single cherished *event*—a genetic mutation—is advanced.

How do the critique's examples demonstrate, first, any external adaptive mechanism or, second, even advance the understanding of adaptation? Wouldn't, "The sudden death of organisms in the area around Mount St. Helens..." (p.289) bring adaptive change for those organisms to a sudden halt? Can mutations in and of themselves skip past any of the three necessary components (i.e., input, logic mechanism, and output) to effect adaptive change? Are random mutations seriously going to be appealed to as a system external organisms facilitating to adaptation? Creationists have argued for decades against mutation as a viable mechanism for information-building adaptive change; however, it should now be clear that advocating for a creative role by mutation goes hand-in-hand with a defense of selectionism.

Significantly, ICR is not alone in pointing out the mystical nature of both selectionism and environmentalism. Several atheists who deplore the admixture of mysticism with their atheism have pointed out these problems as well. The criticism against mysticism by atheist Jerry Fodor of Rutgers University is applicable to both mystical evolutionists and the critique,

So what's the moral of all this? Most immediately, it's that the classical Darwinist account of evolution as primarily driven by natural selection is in trouble on both conceptual and empirical grounds. Darwin was too much an environmentalist. He seems to have been seduced by an analogy to selective breeding, with natural selection operating in place of the breeder. But this analogy is patently flawed; selective breeding is performed only by creatures with minds, and natural selection doesn't have one of those. The alternative possibility to Darwin's is that the direction of phenotypic change is very largely determined by endogenous variables. The current literature suggests that alterations in the timing of genetically controlled developmental processes is often the endogenous variable of choice... (Fodor 2007a, p.20)

It is clear that some evolutionists are getting very close to the truth of looking to organism's endogenous/innate mechanisms and eschewing magical environmental causes. Which leads directly to the final critical argument in ICR's series.

Key Argument 8

Selectionism (notwithstanding natural selections' definition) predictably affirms two mystical attributes to inanimate environments which mentally project causation to it that is indistinguishable from idolatry; 1) selective volition and, 2) capacity to exercise agency.

ICR's series stated, "Natural selection's intrinsic spiritual problem was derided by non-theist observers from the outset...The innate mystical problem of selection was addressed yet again by two distinguished atheists in 2010...Creationists should also seriously consider what is *really* explained scientifically by merely saying that a trait was 'selected for' or 'selected against.' Those magical phrases cannot truly be expected to reveal why certain traits originate and exist in populations... Selection-based accounts will have mystical forces granting 'favor,' but organism-based descriptions will stay on the facts—and honor the Lord...Selection is idolatrous in the basest of ways. Not only does it ascribe intelligence-like powers to unconscious environmental features, like any other idol, but it induces people *not* to give the Lord credit..." (Guliuzza 2011d, p.15).

Atheistic selectionists affirm environmental agency

The article, *Darwin's sacred imposter: Natural selection's idolatrous trap* (Guliuzza 2011d), quoted two distinguished atheists who derided Darwin and his followers' use of selection as a way to simply substitute God's agency in designing living things for a magical environment-based agency. They said,

Familiar claims to the contrary notwithstanding, Darwin didn't manage to get mental causes out of his account of how evolution works. He just hid them in the unexamined analogy between selection by breeding and natural selection...we can claim something Darwinists cannot. There is no ghost in our machine; neither God, nor Mother Nature...and there are no phantom breeders either.... Darwin pointed the direction to a thoroughly naturalistic—indeed a thoroughly atheistic—theory of phenotype [trait] formation; but he didn't see how to get the whole way there. He killed off God, if you like, but Mother Nature and other pseudo-agents got away scot-free. We think it's now time to get rid of them too. (Fodor and Piattelli-Palmarini 2010, pp.162–163)

This assertion was based on what, for these atheists, should be an obvious truism in that inanimate environments cannot exercise agency. Fodor had previously mocked his fellow atheistic evolutionists for ascribing agency to environmental conditions,

it is a Very Bad Idea to try and save the bacon by indulging in metaphorical anthropomorphisms. It

couldn't, for example, be literally true that the traits selected for are the ones Mother Nature has in mind when she does the selecting; nor can it be literally true that they are the traits one's selfish genes have in mind when they undertake to reproduce themselves. There is, after all, no Mother Nature, and genes don't have, or lack, personality defects. Metaphors are fine things; science probably couldn't be done without them. But they are supposed to be the sort of things that can, in a pinch, be cashed. (Fodor 2007a, p.21)

Later, in a letter responding to his critics (evolutionists writing to insist that environments do exercise agency by "selecting-for" traits), Fodor tersely replied, "The rules of the game require respectable adaptationists to give an account of selection-for that doesn't appeal to agency" (Fodor 2007b). He counted on the frank acknowledgement that he and his critics would both acknowledge that environments have no real agency—a hope shown to be errant naïveté.

Theistic selectionists affirm environmental agency

The critique confirms, "Nothing in Scripture explicitly forbids agency on the part of time, space, matter/energy and the environment...[these things are not solely *conditions*] unable to exercise any agency whatsoever at any time" (p.290). Actual volition is one type of agency the critique, not unintentionally, but specifically advanced, saying, "What if the environment *did* select organisms?" (p.288). Since even discerning atheists recognize affirmations about inanimate environments exercising agency as blatant idolatry, the critiques avowal is one of the most astounding statements made in a creationist publication.

As the critique's affirmations reveal, idolatry is inescapable. Why? The environment is the only location where the crucial "selection event" *must* happen. But since there is no real selector, the mystical selection event only happens in their minds and the carrying out of agency is mentally projected onto inanimate environments. Mental imaginations of volitional activity enabling projection of agency onto inanimate things supports idolatrous episodes. Thus, "agency" will be "seen" by some people in rabbit's feet, statues, or talismans, and by other people in acidic soils, Mount St. Helen's eruptions, seeds, (p.289) competition, predation (Calsbeek and Cox 2010, p.613), hypoxia, viruses, bacteria, or death itself (Gilbert and Epel 2009, p.292). All projections of agency onto non-sentient things like these, are substitutes for explanations based on a real, intelligent agency.

Hodge documents how from the very beginning causal uses of natural selection would *deify*, "natural selection as an agent, which Asa Gray for one

condemned” (Hodge 1992, p.216). Lisle also detailed the reification of the concept of natural selection (Lisle 2010, p. 17). Some theistic selectionists wrongly assume that reification and deification results only from metaphysical distortions of selection as seen in the critique’s claim, “The *process* of natural selection does not oppose Scripture; the metaphysical uses of the term do” (p.286). Given that the critique’s *process* substitutes a mystical mental construct in lieu of a real selection event, it is intrinsically metaphysical.

What Scripture also opposes is a belief that inanimate things can exercise agency in a *causal* capacity which Scripture condemns as manifest idolatry. The critique’s belief in environmental conditions exercising agency is no different from the idolatry the Lord condemns in Jeremiah 2:27. There, Jewish priests/prophets ascribed intellect and agency to trees and stones in partial—if not full—causality for their existence, “Saying to a stock [tree] Thou art my father; and to a stone, Thou hast brought me forth [given me birth].” Considering the critique’s affirmations, what might someone think if scientific experts handed them a stick, stone, seeds, or a handful of soil and affirmed that it had powers to exercise agency by favoring or selecting things?

Theistic selectionists believe a shared agency between God and the environment mitigates idolatry

Regrettably, the critique cannot assuage idolatry by its appeal to the fact that God created everything, “Since He created the environment, does He not get the glory when the environment exercises agency as well?” (p.290). This excuse tends toward a worse expression. Exercising agency underlies causality, which is linked to credit, which is linked to glory. Would God have justified the idolater’s behavior in Jeremiah 2 based on a retort, “Since You created an environment of trees and stones, do You not get the glory when they exercise agency as well?” Romans 1 details the problem as people not fully glorifying God (i.e. crediting Him as the Creator), but instead worshipping the creature (literally “creation” itself) by ascribing causality to it. Please, consider the Lord’s declaration in Isaiah 42:8: “I am the LORD: that is my name; And My glory will I not give to another, Nor my praise to carved images.”

In light of ICR’s article’s numerous cautions that ascribing volitional powers to inanimate nature as causal explanations corresponds to mysticism, why doesn’t the critique, yet after review, contain even some clarifying comment as to why its assertions that “environments *did* select organisms” and “the environments exercises agency” are not mystical?

Another assertion of the critique needs clarification. It stated, “Verses 1 and 2 of Genesis 1 do not identify these things [time, space, matter, and the

environment] solely as *conditions*, unable to exercise any agency whatsoever at any time” (p.290). But ICR’s series never claimed that *Scripture defined* them solely as conditions. It is a fact that in Genesis 1:1–2 they are conditions. The series said that throughout Scripture, “barring supernatural intervention (e.g., Numbers 16:31–32; Daniel 6:22; Jonah 1:4, 17), [time, space, matter, and the environment] don’t act and certainly possess no “selective” capacity as the word is properly understood” (Guliuzza 2012a, p.13). The critique never invalidated this claim, but, on one hand, employed another rhetorical device by asserting that they weren’t “forbidden.” Then, on the other hand, simply pronounced that they could exercise agency via (as yet) scientifically undetectable and non-Scripturally specified methods.

The series used design analysis to treat inanimate time, space, and matter as conditions which align with how they are seen in Scripture. It also stated that these conditions are elements of larger designed systems that are interrelated to each other (possibly interdependently). It would have been helpful had the critique corrected an error in ICR’s series by presenting documented environment-based mechanisms, which operate in ways like an organism’s innate systems, to independently direct its self-adjustment.

ICR’s series makes 18 cautions against creationists unwittingly ascribing volitional attributes to inanimate objects—even quoting atheists who were wearied by other atheists ascribing God-like agency to environments. Creationists, of all people in the scientific field, should wholeheartedly endorse this effort to rid evolutionism of its environment-based mystical powers credited with shaping living things over time. This challenge to dump, “other pseudoagents,” and a mystical “appeal to agency” should alert discerning creationists that even scientifically-oriented minds readily get caught in a subtle “idolatrous trap.”

The challenge remains: Identify any definition of natural selection as a process which does not ascribe some type of mystical/magical power(s) to an inanimate thing(s), or attach active verbs to non-volitional actions as part of the selection event.

The question remains: What good reason exists justifying why any creationist should insist on using misleading language that is imprecise, lacks explanatory power, and is mystical—when precise, descriptive, scientific language of real biological processes are available?

Conclusion

All eight key arguments noted above (establishing that the so-called process of natural selection is a misleading, mystical mental construct which is

given credit for the outworking of an organism's innate processes) are still valid. The critique missed ICR's numerous engagements of natural selection as *process*, and instead advances a common, but arbitrary, definition for natural selection that conflicts with numerous others.

So, taken together, the critique passes over causations determined by design analysis. Then, without scientific documentation, advocates that over time a causal process whereby inanimate environments "exercise agency" to adapt organisms via random mutations "selected for" in an undetectable selection step by a mystical environmental "selector" that "favors" them. This natural selection process is unique in that laypersons (any non-PhD) are *unqualified* to evaluate misleading, misnamed, or misdefined usages of language (according to the author and a few of his colleagues), but advanced in the critique, as some readers felt, by much arm waving and venomous verbiage directed toward critics of selection.

References

- Abbott, I., L.K. Abbott, and P.R. Grant. 1977. Comparative ecology of Galápagos ground finches (*Geospiza* Gould): Evaluation of the importance of floristic diversity and interspecific competition. *Ecological Monographs* 47, no. 2: 151–184.
- Ayala, F.J. 2007. *Darwin's gift to science and religion*. Washington, DC: Joseph Henry Press.
- Calsbeek, R., and R.M. Cox. 2010. Experimentally assessing the relative importance of competition and predation as agents of selection. *Nature* 465, no. 7298:613–616.
- Coyne, J.A. 2009. *Why evolution is true*. New York, New York: Viking.
- Creation Museum. 2014. Natural selection exhibit. Petersburg, Kentucky: Answers in Genesis.
- Darlington, P.J. 1983. Evolution: Questions for the modern theory. *Proceedings of the National Academy of Sciences (USA)* 80 no. 7:1960–1963.
- Darwin, C. 1859. *On the origin of species by means of natural selection, or the preservation of favoured races in the struggle for life*. 1st ed. London, United Kingdom: John Murray.
- Dawkins, R. 1976. *The selfish gene*. Oxford, United Kingdom: Oxford University Press.
- Dawkins, R. 1982. Replicators and vehicles. In *Current problems in sociobiology*, ed. King's College Sociobiology Group, pp. 45–64. New York, New York: Cambridge University Press.
- Endler, J. 1986. *Natural selection in the wild*. Princeton, New Jersey: Princeton University Press.
- Endler, J. 1992. Natural selection: Current usages. In *Keywords in evolutionary biology*, ed. E. F. Keller and E. A. Lloyd, pp. 220–224. Cambridge, Massachusetts: Harvard University Press.
- Fisher, R.A. 1958. *The genetical theory of natural selection*. 2nd rev. ed. New York, New York: Dover.
- Fodor, J. 2007a. Why pigs don't have wings. *London Review of Books* 29, no. 20:19–22.
- Fodor, J. 2007b. Why pigs don't have wings. *London Review of Books* 29, no. 23:29.
- Fodor, J., and M. Piattelli-Palmarini. 2010. *What Darwin got wrong*. New York, New York: Farrar, Straus and Giroux.
- Gardner, A., and A. Grafen. 2009. Capturing the superorganism: A formal theory of group adaptation. *Journal of Evolutionary Biology* 22, no. 4: 659–671.
- Gaskill, P., and B. Thomas. 2012. Recent challenges to natural selection. *Journal of Creation* 26, no. 3:76–78.
- Gee, H., R. Howlett, and P. Campbell. 2009. 15 evolutionary gems. *Nature*, doi:10.1038/nature07740.
- Gibbs H.L., and P.R. Grant. 1987. Oscillating selection on Darwin's finches. *Nature* 327, no. 6122:511–513.
- Gilbert, S.F., and D. Epel. 2009. *Ecological developmental biology: Integrating epigenetics, medicine, and evolution*. Sunderland, Massachusetts: Sinauer Associates.
- Grant, P.R., and B.R. Grant. 2002. Unpredictable evolution in a 30-year study of Darwin's finches. *Science* 296, no. 5568:707–711.
- Guliuzza, R. 2011a. Darwin's sacred imposter: Recognizing missed warning signs. *Acts & Facts* 40, no. 5:12–15. <http://www.icr.org/article/darwins-sacred-imposter-recognizing/>.
- Guliuzza, R. 2011b. Darwin's sacred imposter: How natural selection is given credit for design in nature. *Acts & Facts* 40, no. 7:12–15. <http://www.icr.org/article/darwins-sacred-imposter-how-natural/>.
- Guliuzza, R. 2011c. Darwin's sacred imposter: The illusion that natural selection operates on organisms. *Acts & Facts* 40, no. 9:12–15. <http://www.icr.org/article/darwins-sacred-imposter-illusion-that/>.
- Guliuzza, R. 2011d. Darwin's sacred imposter: Natural selection's idolatrous trap. *Acts & Facts* 40, no. 11:12–15. <http://www.icr.org/article/darwins-sacred-imposter-natural-selections/>.
- Guliuzza, R. 2012a. Darwin's sacred imposter: Answering questions about the fallacy of natural selection. *Acts & Facts* 41, no. 2: 12–15. <http://www.icr.org/article/darwins-sacred-imposter-answering-questions/>.
- Hodge, M.J.S. 1992. Natural selection: Historical perspectives. In *Keywords in evolutionary biology*, ed. E.F. Keller and E.A. Lloyd, pp. 212–219. Cambridge, Massachusetts: Harvard University Press.
- Jeanson, N. 2013. Does natural selection exist? A critique of Randy Guliuzza's claims. *Answers Research Journal* 6: 285–292.
- Kingsolver, J.G., H.E. Hoekstra, J.M. Hoekstra, D. Berrigan, S.N. Vignieri, C.E. Hill, A. Hoang, P. Gilbert, and P. Beerli. 2001. The strength of phenotypic selection in natural populations. *The American Naturalist* 157, no. 3:245–261.
- Lewontin, R. C. 1978. Adaptation. *Scientific American* 239, no. 3:212–229.
- Lisle, J. 2010. *Discerning truth*. Green Forest, Arkansas: Master Books.
- Mayr, E. 1963. *Animal species and evolution*. Cambridge, Massachusetts: Harvard University Press.
- Mayr, E. 2001. *What evolution is*. New York, New York: Basic Books.
- Noble, D. 2008. Genes and causation. *Philosophical Transactions of the Royal Society A* 366, no. 1878:3001–3015.

- Shapiro, J.A. What natural genetic engineering does and Does not mean. *The Blog*. Accessed December 6, 2013. http://www.huffingtonpost.com/james-a-shapiro/what-natural-genetic-engi_b_2783419.html.
- Tautz, D. 1992. Redundancies, development and the flow of information. *Bioessays* 14, no. 4:263–266.
- Van Valen, L. 1989. Three paradigms of evolution. *Evolutionary Theory* 9:1–17.